

## REMARKS

Reconsideration and allowance are respectfully requested.

In lieu of claims 1-10, new claims are added. Claims 11-30 are pending. Cancellation of previously presented claims is not a concession that the rejections are correct, but merely presents the claimed invention in better form for examination. Although the subject matter of new claim 24 is not directed to the elected invention, methods of use were not previously restricted and their examination in this application is urged. In the alternative, rejoinder of the withdrawn method claims is requested upon allowance of product claim 1.

The amendments are fully supported by the original disclosure and, thus, no new matter is added by their entry. Support for claims 11-23 and 25-30 may be found, *inter alia*, in the original claims. New claim 24 is based on the paragraph bridging pages 3 and 4 of the specification.

### *Specification/Claim Objections*

The specification and claims were objected to as informal by the Examiner. Their amendment moots these objections. The only exception is the phrase "those that are bifunctional or trifunctional must be differentiated" that is not unclear as alleged on page 3 of the Office Action. The phrase's meaning is clear because it describes the multifunctional acrylic monomers at the beginning of the sentence on page 3, lines 9-10, of the specification by the following two paragraphs on the same page. One paragraph further describes (i.e., differentiates) specific bifunctional acrylic monomers. The other paragraph further describes (i.e., differentiates) specific trifunctional acrylic monomers.

Applicant requests withdrawal of the objections to the specification and claims.

### *35 U.S.C. 112 – Written Description*

Claims 6-10 were rejected under Section 112, first paragraph, as allegedly failing to comply with the written description requirement. It was further alleged, "The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

application was filed, had possession of the claimed invention.” Applicant traverses as cancellation of claims 6-10 moots this rejection.

Here, new claims 11 and 25 require between 10% and 25% of total acrylic monomers are monofunctional acrylic monomers. See page 3, lines 7-8, of the paragraph.

Therefore, withdrawal of the Section 112, first paragraph, rejection is requested because the specification conveys to a skilled artisan that Applicant was in possession of the claimed invention at the time the application was filed.

*35 U.S.C. 112 – Definiteness*

Claims 6-10 were rejected under Section 112, second paragraph, as allegedly “indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” Applicant traverses as cancellation of claims 6-10 moots this rejection.

The Examiner’s suggestions for amending the claims to correct informalities are gratefully acknowledged. Adoption of some of her suggestions moots certain rejections.

Claims 11 and 25 clarify that the pigments have a maximum particle size of not more than 1 micron. The mixture comprises monomers and oligomers, which includes polyol acrylate. The latter’s meaning is known in the art. Polyol acrylates are reaction products of a modified polyol and a (meth)acrylic acid or derivative thereof. See also US 7,652,098 in which such compounds are recited. Thus, a definition of “polyol acrylate” is not required because a specification need not teach, and preferably omits, what is well known in the art. See *Hybritech v. Monoclonal Antibodies*, 231 USPQ 81, 94 (Fed. Cir. 1986). Here, it is clear that viscosity is measured at the same temperature as dilution of the mixture with monofunctional and multifunctional acrylic monomers. The photoinitiator system is simply added to the formulation. It is clearly not activated during production of the ink because the latter is filtered such that particles bigger than 1 micron are removed therefrom. Activation would cause polymerization of monomers and oligomers; but monomers and oligomers are not polymerized during ink production. Rather, they are polymerized after printing to set dispersed pigments on the media (e.g., uncoated paper). See paragraph bridging pages 3 and 4 of the specification. As inferred by the Examiner, the monomers and oligomers are now described as polymerizable.

Applicant requests withdrawal of the Section 112, second paragraph, rejection because the pending claims are clear and definite.

*35 U.S.C. 103 – Nonobviousness*

A claimed invention is unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. *In re Kahn*, 78 USPQ2d 1329, 1334 (Fed. Cir. 2006) citing *Graham v. John Deere*, 148 USPQ 459 (1966). The *Graham* analysis needs to be made explicitly. *KSR Int'l v. Teleflex*, 82 USPQ2d 1385, 1396 (2007). A determination of prima facie obviousness requires a reasonable expectation of success. See *In re Rinehart*, 189 USPQ 143, 148 (C.C.P.A. 1976).

Claims 6-7 were rejected under Section 103(a) as allegedly unpatentable over Kondo (US 2003/0149130). Applicant traverses.

Poise (P) is the CGS unit for viscosity. More conveniently, a centipoise (cP) is 0.01 of a poise and 0.001 of a pascal second (Pa·s) in SI units. See attached definition. Thus, the viscosity of Kondo's ink has substantially greater viscosity (10 to 500 Pa·s) than Applicant's claimed ink ("between 10 and 30 cP" < 0.03 Pa·s). It appears that an inadvertent mistake in conversion between CGS and SI units was responsible for not recognizing that Kondo is non-analogous art that does not render obvious the presently claimed ink. Further, there is no evidence of record that the pigment of Kondo's ink has a maximum particle size not more than 1 micron, did not agglomerate during production of the ink, or that it would have been obvious to reduce the pore size of the filter from 2 microns. Finally, there is no reasonable expectation of success that Kondo would not have been modified to produce the ink of the present claim 11. Thus, for the foregoing reasons, Applicant's invention is patentable over Kondo's disclosure.

Claims 8-10 were rejected under Section 103(a) as allegedly unpatentable over Kondo in view of Bergiers et al. (WO 03/054091). Applicant traverses.

The failure of Kondo to disclose the claimed invention is not remedied by the attempt to combine that disclosure with Bergiers. Some features of Applicant's claimed ink that are not made obvious by the combination of Kondo and Bergiers are: its viscosity as explained above and the maximum particle size of the ink's pigment. Thus, it is

submitted that these features of the present claim 11 are sufficient to distinguish over the cited documents so any other incorrect allegations about their disclosures are not disputed here, but the opportunity to dispute them in the future is reserved.

Withdrawal of the Section 103 rejections is requested because the claims would not have been obvious to one of ordinary skill in the art when this invention was made.

*Conclusion*

Having fully responded to the pending Office Action, Applicant submits that the claims are in condition for allowance and earnestly solicit an early Notice to that effect. The Examiner is invited to contact the undersigned if additional information is required.

Respectfully submitted,

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# Poise

From Wikipedia, the free encyclopedia

The **poise** (symbol **P**, /ˈpɔɪz/) is the unit of dynamic viscosity in the centimetre gram second system of units. It is named after Jean Louis Marie Poiseuille (and not related to the ordinary word poise (http://en.wiktionary.org/wiki/poise), even though its meaning might seem connected).

$$1\ \mathrm{P} = 1.00\ \mathrm{g} \cdot \mathrm{cm}^{-1} \cdot \mathrm{s}^{-1}$$

The analogous unit in the International System of Units is the pascal second (Pa·s):

$$1\ \mathrm{Pa} \cdot \mathrm{s} = 1\ \mathrm{kg} \cdot \mathrm{m}^{-1} \cdot \mathrm{s}^{-1} = 10\ \mathrm{P}$$

The poise is often used with the metric prefix *centi*-. A **centipoise** is one one-hundredth of a poise, and one millipascal-second (mPa·s) in SI units. (1 cP = 10<sup>−2</sup> P = 10<sup>−3</sup> Pa·s) Centipoise is properly abbreviated cP, but the alternative abbreviations cps, cp, and cPs are also commonly seen.

Water has a viscosity of 0.00899 poise at 25 °C and a pressure of 1 atmosphere.<sup>[1]</sup>

## Use in laboratory

A viscometer can be used to measure centipoise.

When determining centipoise, all other fluids are calibrated to the viscosity of water. (in some practices, one can use the following approximation: water at approximately 70 °F (21 °C) is about one centipoise).

Thicker liquids like honey have higher viscosities. For example, while ethylene glycol has a viscosity of just 15 centipoise, honey has a viscosity of 2 000 centipoise and molasses has a viscosity of 5 000 centipoise. Lard has a viscosity of a 100 000 centipoise.

## See also

- Viscosity

## References

- ↑ "Viscosity of Liquids", in CRC Handbook of Chemistry and Physics, 89th Edition (Internet Version 2009), David R. Lide, ed., CRC Press/Taylor and Francis, Boca Raton, FL.

Retrieved from "http://en.wikipedia.org/wiki/Poise"

Categories: Centimetre gram second system of units | Units of dynamic viscosity | Physics stubs | Standards and measurement stubs

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